

Workgroup III.	Partnerships' Engagement			Short-Term Goals	Longer-Term Goals
Rec 6, 7, 9	Engage academic, business and government personnel as STEM mentors, with all stake holders actively participating to maximize human capital and resources.				
	Rec 6	Engage business, industry, and civic leaders to improve STEM education and skills in the Commonwealth and create incentives for Kentucky business			
	6.1	A. Area Development Districts, Ky Girls Stem collaborative Invigorate local P-16 councils through STEM with resources, materials, contacts	B. <ul style="list-style-type: none">• Develop vertical teams such as expanded P-16 Councils to facilitate the local collaboration of P-16 educators, businesses, and government and to facilitate collaborative learning such as AP and international Baccalaureate programs, the Kentucky Academy for mathematics and Science, and informal educational opportunities.		
		I. Initiate contact with regional P-16 Council leadership to place STEM initiatives in a significant role on their annual agenda; ii. Develop a common public awareness campaign using science educators, STEM professionals, and committed other sector (gov/business) people; iii. Take STEM program presentations to regional P-16 Councils emphasizing importance of STEM initiatives to economy of region/state.; iv. Encourage P-16 Councils to apply for state grants to support area STEM initiatives, with collaboration between school districts, PSI and business.			
	6.2	A. Identify private sector programs (like Lexmark's "Teacher Institute" and disseminate info about the programs through P-16 Councils to local schools in each region.	<ul style="list-style-type: none">• Create opportunities for STEM educators and students to apply classroom knowledge to real-world applications in the workplace.		
	6.3	A. Develop a better understanding of how the aging of the workforce will create add'l opportunities for youth and incorporate message into "recruitment/marketing" messages. **** May relate to WKGRP I.	<ul style="list-style-type: none">• Create opportunities for P-16 students to participate in STEM clubs and competitions such as science fairs, robotics competitions, American Math Competitions, and Math Counts.		
		B. Increase the preparation of P-12 students to pursue careers in STEM fields.			

Workgroup III.	Partnerships' Engagement			Short-Term Goals	Longer-Term Goals
		i. Develop mobile science labs in 5 regions of the state to travel to schools and provide scientific instruction and investigative opportunities in STEM fields, particularly in underserved districts; ii. Develop and expand collaborations with such outreach programs as PLTW, GEAR-UP, AHEC, and Gov Scholars Prog, which could lead to the organization of a GSP-STEM. iii. Initiate a Young Bluegrass STEM Scholars Program that provides out-of-school and/or summer workshops for MS students.			
		C. PSIs across the state should provide opportunities on their campuses for P-16 students in their communities. Partnership Inst for M/S Ed Reform (PIMSER) could host website w/list of statewide offerings. Strengthen collaborations with PSIs to provide speakers, making university labs available.			
		D. Identify web resources that provide contacts and info about programs, funding/opportunities for participation to P-16 Councils for dissemination to local school districts.			
	6.4	A. Develop common languages and branding.	• Contribute leadership expertise and support for the STEM public awareness campaign.		
		B. Develop speakers bureau			
		C. Use PSI and HS sporting events for recognitions, awards, pushing the message and brand.			
	6.5	A. Partner with state Chamber and Ky Society of HR Managers to develop an employer survey to catalog existing and future needs, create contacts and awareness, and to enable connections to local and state resources and programs.	• Expand and improve STEM workforce development and training programs so they teach the skills needed in today's knowledge economy, especially at the Area Technology Centers.		
		B. Develop and expand collaborations between education facilities and businesses to "educate" each side on the knowledge bases of teaching/industry.			

Workgroup III. Partnerships' Engagement		Short-Term Goals		Longer-Term Goals
		i. Higher ed leadership should assure that the climate at institutions is open fore private industry input on future STEM-related needs; ii. Initiate and expand a program for students to be exposed to real-world knowledge of applications in the workforce; iii. Develop and exchange program that provides an opportunity for persons in the university to switch with persons in industry for a short period of time. iv. Develop co-teaching of STEM-related courses between professors and industry personnel. v. Expand we developmental training programs to teach skills needed in today's economy.		
	6.6	A. Inclusion of STEM incentives in the Governor's energy plan for the 2009 Ky Gen Assembly	<ul style="list-style-type: none"> • Provide leadership in developing a statewide strategy for energy sustainability and independence. 3/4 increase corporate grant and in-kind funding of STEM education and expand the reach of programs statewide. 	
		B. Use data developed by employer needs survey to connect employers using STEM disciplines with opportunities to help underwrite existing or develop new state and local initiatives.		
	6.7	A. Use employer survey, state and local chambers, KY SHRM and other data sources to ID employer and industry sectors with needs.	<ul style="list-style-type: none"> • Explore incentive programs for businesses that commit to hiring STEM graduates from Kentucky institutions and invest in Kentucky STEM research and education. 	
		B. Connect identified employers with PSI placement sources.		
		C. Retool, develop new, or fund existing incentive programs to encourage hiring of Ky graduates when/where available.		
		D. Provide incentives to encourage teachers and students to elect careers in STEM fields.		

Workgroup III. Partnerships' Engagement				Short-Term Goals	Longer-Term Goals
		i. Provide STEM undergrad scholarships tied to a 5-yr commitment to a Ky business; ii. Provide grad scholarship to support a MS in STEM areas. iii. Provide stipends for teachers to obtain PD in STEM workshops as well as AP instruction. Iv. Expand KSTC grant for Advance Ky which targets schools not offering AP courses. v. Develop a STEM Teacher Loan Forgiveness Program			
	Rec 7	Develop an ongoing, coordinated, statewide STEM initiative that maximizes the impact of resources among state agencies, schools, colleges and			
	7.1	A. Develop a set of carefully aligned and validated performance indicators.	• Develop a report card that uses rigorous program assessment to measure Kentucky's progress in implementing STEM initiatives.		
		B. Utilize PSI program productivity reports to develop STEM "Score" that provides a baseline for tracking progress.			
	7.2		• Collect and disseminate global best practices focused on STEM instruction.		
	7.3	A. Expand the existing STEM panel to ensure STEM initiatives are moving forward as well as generating as assessment report card.	• Create a standing body of education, business, economic development, government and nonprofit professionals to oversee and coordinate STEM initiatives at the statewide level.		
		i. Develop a subgroup which meets periodically, assesses programs, and generally "feels the pulse" of the initiatives.			
			• Provide incentives for faculty and students to help catalyze STEM company formation or growth in the Commonwealth according to the "Statewide Strategy for Economic Development."		
	Rec 9	Developing STEM mentoring programs that partner students in grades five through 12, their teachers, or both, with engineers, business professionals,			

Workgroup III. Partnerships' Engagement				Short-Term Goals	Longer-Term Goals
		A. Provide data/contacts on regional employers w/STEM discipline needs to local P-16 Councils. Councils to provide to local school districts. Formalized Speakers Bureau could also be used to screen speakers and assure link to academic coursework. Ky Engineering Exposure Network (KEEN), begun in '91 has been great resource for P-8 teachers.			
		B. Develop ways to recognize/reward STEM professors at Ky PSIs for outreach to industries, using real world examples in the classroom - make part of Promotion and Tenure (Distribution of Effort minimums), i.e. Regional Stewardship/Engagement.			
Workgroup III. Partnerships Conf Call 9/18/08					
Chair: Mike Rideneur					
Workgroup Participants: Mike Rideneur; Benny Lile; Sue Scheff; William Kovacic; Jan Muto; Molly Toney; Dave Magrane; Henry Hunt; Shelia Medina; Rodney Andrews					
10/7/2008 Priority Setting: contributing: Mike, Shelia, David, Keith, Patick, Bill, Molly, Rodney, LL, PW					
PRIORITIES			COMMENTS		
		1 Survey employer needs for STEM employees/ current and future needs. What is expected in the workplace of current hires? Determine employers of STEM disciplines in Ky.	Chamber and SHRM may be able to provide		
		2 Partnership Engagement through Statewide or Regional Summit - STEM DAYS with P-16 Councils providing data/information; engaging superintendents and school boards.	Utilize existing media of Ky Academy of Science, State Superintendents Organization, Governor's Environmental conference - Organize the silos.		
		3 Branding and development of specific business/commerce messageing themes. Emphazie industry best practices to grow future employees.	Discuss with DCI to see if they have PR funds/collaborate with Econ Development		
			Need for toolkit/speakers' presentation that each advocate can take "on the road" to civic/ed/bus/gov sector groups. OpEd and Speaker Bureaus - writers needed.		

Workgroup III. Partnerships' Engagement				Short-Term Goals	Longer-Term Goals
			Be attentive to what will resonate with students/parents/educators/employers and in ways that may be non-traditional to current workgroup members		
		4 KB: Collaborate with work being done by KCTCS STEM Task Force	Much work is being done already and student focus groups have determined some reaching "wired" audience in traditiona, development and dual education.		